



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 95TH AIR BASE WING (AFMC)  
EDWARDS AIR FORCE BASE CALIFORNIA

AUG 19 2010

MEMORANDUM FOR SEE DISTRIBUTION

FROM: 95 ABW/CEVR

SUBJECT: Minutes of the Environmental Restoration Program Restoration Advisory Board  
(RAB) Meeting, 20 May 2010

1. Time: 1730
2. Place: Boron, California
3. Chairman: Mr. Peter Zorba, Public Co-chair (Lancaster Public Representative)
4. The following RAB members were present:

<u>Name</u>	<u>Position</u>
Mr. Kevin Depies	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) Remedial Project Manager (RPM)
Mr. Ai Duong	Edwards Air Force Base (AFB) RPM
Ms. Julie English	Boron Public Representative
Dr. Joseph Healy, Jr.	United States Environmental Protection Agency (U.S. EPA) RPM
Mr. Tim Post	Cal/EPA Regional Water Quality Control Board (RWQCB) Lahontan Region RPM

5. The following members were absent:

<u>Name</u>	<u>Position</u>
Col Jose Torres	Air Force Co-chair
Mr. Milton McKay	Air Force Research Laboratory (AFRL) Public Representative
Dr. David Newman	Rosamond Public Representative
Mr. Richard Salazar	Edwards AFB Main Base Test Wing Public Representative
Mr. Edward Sileo	Lancaster Public Representative (Alternate)
Mr. Robert Smith	California City Public Representative
Dr. Leslie Uhazy	Rosamond Public Representative (Alternate)
Ms. Brenda Weems-Hunter	Edwards AFB South Base Public Representative
Mr. Victor Yaw	Mojave Public Representative
Vacant	Edwards AFB Base Housing Public Representative
Vacant	Edwards AFB Main Base Air Base Wing Public Representative

Vacant	Edwards AFB North Base Public Representative
Vacant	National Aeronautics and Space Administration (NASA)
	Public Representative
Vacant	North Edwards Public Representative

6. The following advisors were present:

<u>Name</u>	<u>Organization</u>
Ms. Patrice Hallman	95 ABW/CEVR
Mr. Gary Hatch	95 ABW/PAE
Ms. Rebecca Hobbs	95 ABW/CEVR
Mr. Tom Merendini	95 ABW/CEVR
Mr. Bruce Oshita	95 ABW/CEVR
Mr. Stephen K. Robinson	95 ABW/PA
Mr. Paul Schiff	95 ABW/CEVR

7. Others present were as follows:

<u>Name</u>	<u>Organization</u>
Mr. Ranney Adams	AFRL Environmental Manager
Mr. Todd Battey	AECOM Technical Services, Inc. (AECOM)
Mr. Joe Dunwoody	95 ABW/CEVR
Mr. William Hall	Air Force Center for Engineering and the Environment (AFCEE)
Ms. Barbara Houghton	Kern County Environmental Health Services Department
Mr. Gary Krongard	United States (U.S.) Army Corps of Engineers
Ms. Patti Kumazawa	JT3/CH2M HILL (Recorder)
Mr. Dave Leeson	AFCEE
Mr. Bill Muir	Public
Ms. Leilani Richardson	JT3/CH2M HILL
Mr. Paul Rogers	JT3/CH2M HILL
Mr. Ray Sugiura	AECOM

8. Mr. Zorba read the *Statement of Purpose and Conduct*. A moment of silence was observed in memory of Mrs. Ruby Messersmith, former North Edwards Public Representative and RAB Public Co-chair. Mr. Zorba presented the minutes from the 18 February 2010 RAB meeting for acceptance. The minutes were accepted as presented.

9. Restoration Advisory Board Training Session—*Cleanup Technologies* (attachment 1). Mr. Merendini led a training session explaining cleanup technologies used at Edwards AFB. Mr. Merendini discussed removal, containment, *ex situ* and *in situ* treatment technologies, and monitored natural attenuation as solutions used to address soil and groundwater contamination at Edwards Air Force Base.

10. Presentation—*Compliance Restoration Program* (attachment 2). Mr. Oshita briefed on the newly-established Compliance Restoration Program (CRP) under the Environmental Restoration Program (ERP).

a. Previous ERP efforts have been limited to contamination that occurred before 1984 (a petroleum exclusion also applied). The U.S. Air Force revised policies enabling sites under the CRP to use restoration funds which were previously unavailable. Until now, the compliance restoration sites have been the priority in terms of program funding. Currently, funding from the Defense Environmental Restoration Program can be used for these Compliance Program sites, which will be called the CRP. The U.S Air Force cleanup program funds three elements now: the Restoration Program, CRP, and Military Munitions Response Program (MMRP).

b. The U.S. Air Force cleanup program will prioritize and optimize resource allocation. As an example, groundwater monitoring programs can be consolidated, and redundancies eliminated, by combining sites from some or each of the three elements. For Edwards AFB, this concept makes more sense for the future schedule. The cleanup program will also create greater consistency when working with regulatory agencies and provides 'one voice' from the U.S. Air Force.

c. An initial site inventory at Edwards AFB has been completed. Seven sites were identified during the initial survey by AFCEE. Five of those seven sites will receive funding in Fiscal Year 2011. The AFCEE will prioritize Edwards AFB sites against sites at other Air Force bases for funding, and prioritization will be based on contamination, regulatory relationships between regulators and the base, and potential or pending notices of violations.

d. Mr. Oshita said that some of the Edwards AFB sites may fall under the *Federal Facility Agreement* if the sites involve the release of solvents. As in the past, any petroleum-only contaminated sites will be regulated by Kern County. A follow-up site inventory focusing on oil/water separators will be scheduled sometime between January and December 2011. A final site inventory report will be released in May 2012.

11. Restoration Advisory Board Vacancy Update—Mr. Hatch reported that applications had come in for the Main Base and North Edwards vacancies. The new representatives should be seated by the next RAB meeting. This leaves three remaining vacancies: NASA, North Base, and Housing. Mr. Zorba commented that paid advertising on local radio stations should not be necessary, as the remaining vacancies are all on base.

## 12. Reports from Public Representatives.

a. Ms. English, Boron, introduced herself to the board.

b. Mr. Zorba, Lancaster, reported that he had received a question from a member of the public regarding uses of contaminated groundwater treated on base. Mr. Zorba spoke with Mr. Hatch to get a clearer answer and passed the response on. Mr. Zorba distributed the *Report to Stakeholders*.

## 13. Reports from RPMs.

a. Mr. Depies, DTSC, said that state furloughs have impacted the state's ability to review reports. In July 2010, the furloughs are scheduled to end.

b. Mr. Post, RWQCB, said he currently has two Records of Decision (RODs) on his desk. Dr. Healy indicated that, after completion of the current RODs under RPM review, eight RODs will have been completed, with eight more to go.

c. Dr. Healy, U.S. EPA, presented the U.S. EPA 2010 Annual Report to the board. Dr. Healy also made two suggestions for work related to the community.

(1) Prepare a feature on gravelling birds (birds that use pebbles in their digestive processes) for the *Report to Stakeholders*, because hazardous debris from areas such as the skeet ranges could harm those types of birds.

(2) Prepare a digital video disk on a *Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA)* tour of Edwards AFB to be shared with decision makers in Washington D.C. so they can better understand the base. Mr. Zorba said he sees similar issues with decision makers in Sacramento and thought a video would be beneficial.

d. Mr. Duong called for reports from Environmental Management program managers (attachment 3).

(1) Mr. Schiff briefed on the Operable Unit (OU)1 Main Base Flightline and MMRP. Mr. Schiff showed board members maps of the North and South OU1, and Site 44 Plumes.

(a) Mr. Schiff said that the MMRP parallels the *CERCLA* process in a systematic way. In 10–14 May 2010, the Air Force submitted the final *Comprehensive Site Evaluation Phase II Report* to the regulatory agencies. The report details the sampling efforts, site walks, and visual and geophysical data used to detect munitions items or debris. Some areas will be carried forward in the MMRP.

(b) The Air Force is working on several plans before an unexploded ordnance contractor can begin surface clearance efforts at AL504 (on base), and AL505-2 and 505-4 (off base), where the Air Force knows there is significant metal debris. An Engineering Evaluation/Cost Analysis (EE/CA) was completed 10–14 May 2010 and sent to the regulators for review and comment. The EE/CA document looks at different alternatives for the sites.

(c) The on-base area, AL504, was a battleship-shaped target made from rocks and talc near the AFRL. During the recent Air Force's investigation, craters were found at the site, which indicates that live bombs were dropped on the site during the 1930s through 1940s. Debris and bomb fragments were also found. The target feature itself is a historical site under the cultural resources program, meaning the site cannot be destroyed. The area is also within desert tortoise critical habitat.

(d) The off-base target, AL505-2, near Boron, was used in the 1950s for practice bombs. Mr. Schiff showed a map which displayed the scattering of surface debris from past surveys. Once right-of-entry is obtained from the land owners, the Air Force plans to clear the surface debris. Mr. Depies asked if any live munitions had been found in the area. Mr. Schiff replied that none have been found in this particular area.

(e) To the west of AL505-4, south of the Precision Impact Range Area, one live photoflash bomb was found, along with a few inert 500-pound-concrete bombs. The Edwards AFB Explosive Ordnance Disposal unit moved the photoflash bomb onto base property and detonated the

bomb. Once the surface debris is cleared, the Air Force will move forward with a Remedial Investigation.

(2) Ms. Hobbs briefed on OU2, OU7 Site 3, and OU7 Chemical Warfare Materiel. The OU2 ROD was signed in June 2009.

(a) Sites 76 and 86 contain contamination in the groundwater. At Site 76, the Air Force plans to use *in situ* bioremediation. Gaseous nutrients will be injected into the groundwater to wake up native bacteria to destroy the trichloroethene (TCE). *In situ* chemical oxidation will be used at Site 86. Potassium permanganate will be injected at the site to destroy the TCE.

(b) For Site 29, most of the surface debris dates from the demolition of World War II-era facilities at South Base in the 1980s. At least 95 percent of the surface debris was recyclable. Metal, some plastics, and concrete were recycled. Samples from the buried debris indicate that most of the material from the samples should be recyclable as well. The Air Force proposes to clean up and close the site, rather than cap and monitor it.

(c) The Sites 5/14 plume is 1-mile long and is composed of dissolved solvents and jet fuel. One area of the plume has floating jet fuel. Environmental Management plans to use gaseous nutrient injection to break down the floating jet fuel. Potassium permanganate will be injected in the plume to clean up dissolved contaminants, using *in situ* chemical oxidation.

(d) For Sites 81 and 102, instead of the EE/CA discussed on the slide, the Air Force is planning to prepare a Remedial Investigation Work Plan Addendum, which will detail a process for laying out a 75-foot grid on the two sites. At each intersection on the grid, investigators will count lead shot, weigh skeet target debris, and take soil samples, if necessary, to check for soil contamination.

(e) Under the OU7 Chemical Warfare Materiel program, work continues on three sites related to the Aberdeen Bombing Mission. The ROD has been signed.

(3) Ms. Hallman briefed on OUs 4 and 9, (AFRL).

(a) Ms. Hallman discussed field activities, including the Site 172 vapor-extraction unit located outside a building with indoor air vapor issues. After shutting down the Site 172 system for a few days, testing showed vapors inside the building had increased. Consequently, the soil vapor-extraction unit was returned to operation.

(b) Most wells at AFRL do not produce a lot of water. However, the well at Site 177/325 is producing a significant amount of water and a test was conducted to estimate the sustainable yield for the well.

(4) Mr. Oshita briefed on OU5/10, (North Base).

(a) Mr. Oshita showed an aerial photograph of the area near Site 231. The Site 231 dig/haul time-critical removal action has been initiated by the cleanup program to fully maximize

the window of opportunity between August and December 2010. This timeframe represents when the U.S. Army Sky Warrior Program Phase I ends, and before Phase II begins. Mr. Oshita stated that this dig/haul will occur during the same timeframe when the 231 plume delineation and characterization work is going on in the field. Mr. Post referenced the aerial photograph showing the proposed layout for Phase II and asked about the three large red Xs over the three hangar buildings. Mr. Oshita replied that these were hangars currently unavailable to the Army Sky Warrior Program. Mr. Oshita went on to say that these three hangars may eventually become occupied by the Sky Warrior Program, especially if the project transitions to permanent beddown status.

(b) The Sky Warrior Program has requested the possibility of permanent beddown status with the base wing protocol office. Permanent status could become a reality sometime after Phase II is completed, which could allow the existing facilities to remain in place (e.g., dining, sleeping, laundry, refrigerator trailer, and barbeque shelters) within a fenced compound.

(5) Mr. Merendini briefed on OUs 6 (NASA), 7 (Basewide Miscellaneous), and 8 (Northwest Main Base). Site 25 has been removed from the OU8 process and will have its own ROD. The Site 25 plume is 1.5 miles long.

14. The next meeting is scheduled for 19 August 2010 in Rosamond, California (site location is to be determined). The meeting adjourned at 1942.

APPROVED AS WRITTEN.

  
A.D. DUONG  
Acting Air Force Co-chair  
Restoration Advisory Board

  
PETER ZORBA  
Public Co-chair  
Restoration Advisory Board

Attachments:

1. Restoration Advisory Board Training—*Cleanup Technologies*
2. *Compliance Restoration Program*
3. Reports from Environmental Management program managers

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